



kuvshinov 1-intron.ST25
SEQUENCE LISTING

<110> UniCrop Ltd

<120> A molecular mechanism for gene containment in plants

<130> kuvshinov 1-intron

<160> 13

<170> PatentIn version 3.2

<210> 1

<211> 357

<212> DNA

<213> artificial sequence

<220>

<223> Plant adapted synthetic coding sequence of barnase gene

<400> 1

cgcggtatcca tggcacaagt tatcaacacc tttgatggag ttgctgacta ctttcagacc	60
taccataagc ttccagataa ctacatcacc aagtctgagg ctgaggctct tggatggggtt	120
gcttctaagg gaaaccttgc tgatgtcgct ccaggaaagt ctatcggagg tgatatcttc	180
tctaacaggg agggaaagct tccaggaaag tctggaagga cctggaggga ggctgatatc	240
aactacacct ctggattcag gaactctgat aggatccttt actcttccga ctggcttatc	300
tacaagacca ctgaccacta ccagaccttc accaagatcc ggtgagagct cgagcgc	357

<210> 2

<211> 299

<212> DNA

<213> artificial sequence

<220>

<223> Plant adapted synthetic coding sequence of barstar gene

<400> 2

cgcggtatcct gatcatgaag aaggctgtta tcaacggtga gcaaattagg tctatctctg	60
atcttcacca gaccttaag aaggagcttg ctcttccaga gtactacgga gagaaccttg	120
atgctctatg ggattgcctt accggatggg tggagtaccc acttgttttg gaggaggaggc	180
agtttgagca gtctaagcag ctactgaga atggagctga gagggttctt cagggttttcc	240
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<210> 3

<211> 529

<212> DNA

<213> artificial sequence

<220>

<223> intron of uidA gene

<400> 3

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*actagtttac aaacgtttcc ctatataaac cctcctttgt tcaactgcttt cctccctgct 60
 gtggcttctc tccgaagttc atcccgggtcc acctgcaaaa taagtaataa gataaagtaa 120
 aaaagttagt atggctcaag ttattaatac ttttgatgga gttgctgatt atcttcaaac 180
 ttatcataaa cttccagata attatattac taaatctgaa gctcaagctc ttggatgggt 240
 tgcttctaaa ggaaatcttg ctgatgttgc tccaggaaaa tctattggag gagatatttt 300
 ttcaaataga gaaggaaaac ttccaggaaa atctggaaga acatggagag aagctgatat 360
 taattatact tctggattta gaaattcaga tagaatcctt tattcatctg attggcttat 420
 ttataaaact acagatcatt atcaaacttt tacaaaaatt agataaatat ttgtattttt 480
 tgtatgttgt gatcattaat aaataaataa atacatacct cttctgcag 529

<210> 4
 <211> 52
 <212> DNA
 <213> artificial sequence

<220>
 <223> the last (third exon) of uid gene

<400> 4
 gtggaccggg atgaacttcg gagagaagcc acagcagggg ggaaagcagt ga 52

<210> 5
 <211> 51
 <212> DNA
 <213> artificial sequence

<220>
 <223> 5'UTR of barnase gene

<400> 5
 catcccgggtc cacctgcaaa ataagtaata agataaagta aaaaagttag t 51

<210> 6
 <211> 38
 <212> DNA
 <213> artificial sequence

<220>
 <223> 3' flanking signal of the intron of uidA

<400> 6
 actaaccttt ttactttatc ttattactta ttttgcag 38

<210> 7
 <211> 474
 <212> DNA
 <213> artificial sequence

<220>
 <223> 35 S promoter of CaMV

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• <400> 7
 gcggaattca attgatcaac atggtggagc acgacactct cgtctactcc aagaatatca 60
 aagatacagt ctcaagaagac cagagggcta ttgagacttt tcaacaaagg gtaatatcgg 120
 gaaacctcct cggattccat tgcccagcta tctgtcactt catcgaaagg acagtagaaa 180
 aggaagatgg cttctacaaa tgccatcatt gcgataaagg aaaggctatc gttcaagaat 240
 gcctctaccg acagtgggtcc caaagatgga ccccccacca cgaggaacat cgtggaaaaa 300
 gaagacgttc caaccacgtc ttcaaagcaa gtggattgat gtgatattct cactgacgta 360
 agggatgacg cacaatccca ctatactcta tctactgatag agtctatata agactctatc 420
 actgatagag tgaactctat cactgataga gtcgacggat ccatggaatc cgcg 474

<210> 8
 <211> 10
 <212> DNA
 <213> artificial sequence

<220>
 <223> sequence upstream the PstI site

<400> 8
 cgcttttctg 10

<210> 9
 <211> 10
 <212> DNA
 <213> artificial sequence

<220>
 <223> changed sequence upstream the pstI site

<400> 9
 tgccttctg 10

<210> 10
 <211> 10
 <212> DNA
 <213> artificial sequence

<220>
 <223> polyadenylation signal in transcription unit near the upstream element (NUE)

<400> 10
 ttatttattt 10

<210> 11
 <211> 18
 <212> DNA
 <213> artificial sequence

<220>
 <223> Forward GUS-LcF primer

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• <400> 11
atcagcgttg gtgggaaa 18

<210> 12
<211> 18
<212> DNA
<213> artificial sequence

<220>
<223> reverse GUS-LcR primer

<400> 12
acgaatatct gcatcggc 18

<210> 13
<211> 716
<212> DNA
<213> artificial sequence

<220>
<223> Vigna mungo (SH-EP promoter), Bacillus amyloliquefaciens (barnase gene), Escherichia coli (uidA gene)

<400> 13
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caattctctg agtgcgtgcc acagtttggg atcttcatga ttgctcattg ttcatgccca 120
taaggaacat gtaacttcct catttatatta ttattgcttt tgttttcttc tcactagttt 180
acaaacgttt ccctatataa accctccttt gttcactgct ttcctccctg ctgtggcttc 240
tctccgaagt tcatcccggt ccacctgcaa aataagtaat aagataaagt aaaaaagtta 300
gtatggctca agttattaat acttttgatg gagttgctga ttatcttcaa acttatcata 360
aacttccaga taattatatt actaaatctg aagctcaagc tcttggatgg gttgcttcta 420
aaggaaatct tgctgatggt gctccaggaa aatctattgg aggagatatt ttttcaaata 480
gagaaggaaa acttccagga aaatctggaa gaacatggag agaagctgat attaattata 540
cttctggatt tagaaattca gatagaattc tttattcatc tgattggctt atttataaaa 600
ctacagatca ttatcaaact tttacaaaaa ttagataaat atttgtatatt tttgtatggt 660
gtgatcatta ataaataaat aaatacatat ctcttctgca gcaggaaggc agccga 716